



William T. Kemper Center for Home Gardening

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Roses

Often referred to as the ultimate of all garden plants, roses have the beauty and fragrance which attract the interest of all gardeners. Creeping ground covers to upright, large bush forms, climbers and small miniatures are available to fill different areas of the garden. An equally broad selection of flower shapes and colors are also available today, however, this has come about from centuries of plant breeding.

In nature, the genus *Rosa* (150 species) exists in all parts of the Northern Hemisphere including parts of Alaska and as far as south as Mexico and Northern Africa. The modern day roses are products of cultivation which probably first started in China several hundred years before the birth of Christ. During the Roman period, roses were extensively cultivated in the Middle East, used as confetti in celebrations of honor, for medicinal purposes and as a source of perfume which came from distilled rose petals. Large public rose gardens were established by the Roman nobility south of Rome.

After the fall of the Roman Empire, roses cycled in and out of popularity. Josephine, the wife of Napoleon, became well known for her love of roses and established an extensive collection of over 250 varieties at an estate garden close to Paris in the early 1800s. This was the stage for Pierre Joseph Redoute's work as a botanical illustrator. In 1824, he completed a watercolor collection called 'Les Roses' which stands as one of the finest records of botanical illustration.

It wasn't until the late eighteenth century that cultivated roses were introduced into Europe from China and most modern day roses can be traced back to this ancestry. These introductions were repeat or 'perpetual bloomers' making them unusual and of particular interest to hybridizers because these plants could be bred with native rose plants to select for hardiness and a long blooming season.

Rose Types

There are three broad types of roses for gardeners to choose from; species and shrub roses; old garden roses; and modern roses.

Species roses are those which are found in the wild. These plants have a tendency to grow large, perhaps in excess of 8 feet high and have a shrub form. They typically require little maintenance, are the hardiest in cold climates and have little need for pruning.

Plant breeders who crossed different species roses produced hybrids that were specially selected for garden culture and these are called shrub roses. They are sometimes difficult to distinguish from species roses because of the close genetic relationship, however, they share the same desirable hardiness and requirement for low maintenance.

Old garden roses include all variety selections and hybrids that could be identified as members of a specific group of roses developed before 1867. This date is important because it marks the introductory anniversary of the first hybrid tea rose called 'La France'. Old roses have recently become more popular probably because of the historical nostalgia. However, these plants show a great tendency towards disease resistance, tremendously fragrant blooms and cold hardiness.

Modern roses include all those rose groups which were developed after the introduction of the first hybrid tea rose in 1867. Rose plants typically found at the local nursery are considered modern roses. This class includes a large array of plant forms, flower colors, fragrance differences and growth habits. The four main groups in this class are hybrid teas, polyanthas, floribundas, and grandifloras. Other roses which do not classify as distinct groups, however, are recognized garden forms include: miniatures, tree roses and climbers.

Landscaping with Roses

Because of the large number of growth habits and sizes, there is always a place for roses somewhere in the garden, around the foundation or on a balcony. Low growing hybrid teas, floribundas, creepers and miniatures can be used as edging plants around a garden border or walkway. Shrub and species roses are well suited as background plantings because of their height and can be displayed against foundations, along fences or walls. Climbers can be trained to crawl on a fence or wire trellis to hide structural features or create enclosed spaces. Miniature roses can be potted and placed on patios or lined in rows around outdoor living spaces. They can also be grown indoors for flower production all year long.

The first step in choosing a rose starts with designing the garden. A more formal approach would be to concentrate roses in one area with some kind of symmetry or uniform arrangement. This idea is very popular and has the advantage that all maintenance and cultural activities pertaining to roses occur in one place. On the other hand, roses can be scattered throughout the landscape with other plants as companions and if the proper planting conditions prevail, you can enjoy their beauty in clumps or individual plantings. If the intended purpose is to raise a cutting garden, then special consideration should be made with regard to access. Plants should be spaced far enough apart so that you can move freely between and not compact the root zone.

Choosing the Planting Site

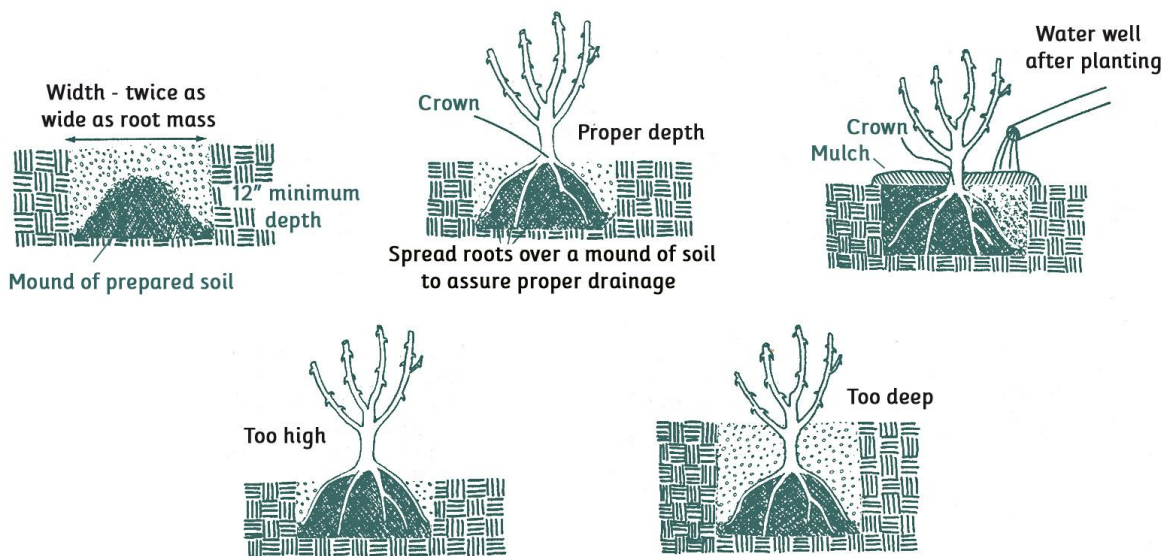
Growing roses is really very easy, however, you will be wise to choose a site with the following characteristics: 6 hours or more of full sunlight (morning sun is best), some protection from wind, a well-drained soil, soil with high content of organic matter, and slightly acidic soil (pH 6.0- 6.8)

It is helpful to sketch the layout of the landscape prior to deciding how many and what roses could be planted. This should be done to scale taking special notes as to the sizes of other neighboring plants. Of critical importance in choosing a rose plant is the mature size. In turn, the size of the plant depends upon how much pruning, cold and heat and the length of the growing season. There are also great variations in growth habits even within groups.

Growth Habits	Height at Maturity (ft.)
Miniatures	1-2
Floribunda	2-3
Hybrid Tea	3-5
Grandiflora	3-6
Shrub and Species	6-8
Climbers	6-20

Figuring the mature height will give you some indication of the mature width if you use the standard rule of thumb that the width is roughly two-thirds the height. When in doubt, give the plants plenty of room. This will improve air circulation and disease control, access for maintenance and plant competition for water and nutrients.

Planting



Roses can be planted at any time of year depending upon whether they come as bare rooted plants (without soil) or as container plants. It is preferable to plant bare rooted plants in the spring because winter temperatures can be damaging to fall plantings. The same goes for container roses; however, the planting season can be extended more into summer since these plants have already become established in the pots and will adjust much better to warmer summer conditions.

After purchasing bare rooted plants, soak them in a bucket of water for several hours if they are to be planted immediately. This will rehydrate the roots. If you cannot plant for a day or two, do not soak them. Instead, store the plants in a cool place with some wrapping material around the roots to prevent moisture loss. They can be kept for several days this way.

Plan where you are to dig the holes. Space floribundas and hybrid tea roses 2 to 3 feet apart; grandifloras, shrub and old roses 3 to 5 feet apart; and climbers 8 to 10 feet apart.

Several days before you purchase the plants, prepare the planting site by applying a 4 inch layer of leaf compost, peat moss or aged manure over the surface of the site. Dig this material into the soil, mixing thoroughly to the proper planting depth.

Generally, the larger the planting hole, the better the results. Dig the hole at least 18 to 20 inches wide and 12 to 16 inches deep with straight sides and a flat bottom. For bare rooted plants mound the soil in the bottom of the hole and spread the root system over the mound so when the hole is filled, the stem is buried 1 -2 inches below ground. Modern day roses are grafted onto a hardy root stalk and this will protect the graft union.

Next, fill with soil about half way covering and packing to stabilize the root system. Fill the hole with a gallon or more of water and let drain away then, finish mounding the soil so that the canes are buried to

about 6 inches. Water well and let settle. Mulch up to the stem with chipped bark or leaf mold, but do not cover the stem. It is ideal to form a water basin with the mulch to catch the water and direct it downward.

Planting container roses is much the same as bare rooted plants. Cut the container with a sharp knife or pruner to expose the root ball. Remove the plant root system intact and place into a hole dug at least 6 inches larger in diameter than the size of the container. The spacing and depth is the same as with bare rooted stock.

Care and Maintenance

Once the plant is established in the site, you will be concerned with watering, fertilizing, pruning and mulching.

A simple rule of thumb for watering is to do it deeply and slowly to prevent run-off. Light waterings should be avoided. Also, guard against watering the foliage because this promotes leaf and cane diseases. If this is not possible, then water in the early morning so that water on the foliage can quickly dry.

Modern roses are heavy feeders and need some fertilization during the season. Ideally, a soil test should be run to accurately determine the levels of phosphate and potassium already present in the soil and establish the pH. Recommendations from these tests should be followed closely so that excess fertilizers are not applied.

The first fertilizer application should be made after the last threat of frost. Pellet fertilizers which are particularly high in phosphate can be used. Select 5-10-5, 4-8-4, or a general garden fertilizer like 10-10-10. Use about one heaping tablespoon per plant evenly distributed around the base of the plant or about 3 pounds of 5-10-5 per 100 square feet spread over the bed. Thereafter, about every 6 weeks through the month of July make another application.

Pruning procedures differ with the type of rose being grown and the level of appearance desired. Generally, minimize the pruning for first year plants. Thereafter, when cutting flowers, remove only enough to produce the length stem required leaving at least 2 complete leaves below the cut. At the end of the season for modern roses like hybrid tea, floribunda and grandiflora roses, prune the tops out to about 18 inches so that the winds do not catch and damage the plants. In the spring when temperatures have warmed up, finish pruning by cutting the canes back into the living tissue leaving a 4 to 6 inch stub.

Old roses and shrub roses need very little maintenance pruning. These should receive a light spring pruning to shape the plant. Climbers should be pruned after flowering. Old canes should be removed at the base of the plant. This will stimulate the development of young, vigorous canes.

Missouri Botanical Garden's Suggested Cultivars

Hybrid Tea

<i>Color</i>	<i>Variety</i>
red:	Mr. Lincoln, Imperial, American Spirit
white:	Homer, White Delight, Pascali
pink:	Bewitched, Tiffany, Memory
yellow:	Graceland, Peace, Sunbright
orange:	Tropicana, Dynasty, Dolly Parton

Floribunda

red:	Show Biz, Europeana, Pinocchio
white:	Iceberg, Ivory Fashion, Class Act
pink:	Pleasure, Fashion, Nearly Wild

yellow:	Sunsprite, Amber Queen, Summer Fashion
orange:	Cathedral, Marina, Impatiens
<i>Grandiflora</i>	
red:	Love, Carrousel, Scarlet Knight
white:	White Lightning
pink:	Tournament of Roses, Pink Parfait, Prima Donna
yellow:	Gold Media, Buccaneer, Shining Hour
orange:	Shreveport, Camelot, New Year
<i>Shrub/Landscape</i>	
pink:	Carefree Wonder
white:	Sea Foam
all colors:	Meidelland Roses
<i>Climbers:</i>	
red:	Improved Blaze, Tempo
yellow:	Golden Showers
orange:	America

All American Rose Selection (AARS)

To ensure that new rose selections have qualities which we all desire in garden roses. All American Rose Selection, Inc. has established 24 testing sites throughout the U.S. to evaluate rose introductions. The Missouri Botanical Garden is one of those sites. Each year over 20 new selections are tested. Information is collected over a 2 year period on each plant. The categories of information evaluated include:

- 1) rating for vigor in climate grown
- 2) disease resistance
- 3) foliage and flower quality
- 4) growth habit
- 5) bud and flower form
- 6) opening and finishing flower color
- 7) fragrance
- 8) stem qualities
- 9) novelty

The program results in scoring rose selections compared with other roses and standards in the same test plot. The scoring system reflects the consumer demand for beautiful and easy-to-grow roses. When you buy your roses, look for the AARS tag which symbolizes a level of excellence from the rose growers everywhere.

For further information about roses, contact:

American Rose Society P.O. Box 30000 Shreveport, LA 71130

Heritage Rose Group North Central Region Route 3 Monroe, WI 53566

All-America Rose Selections, Inc. 221 N. LaSalle ST, Suite 3900, Chicago, IL 60601

AARS Winners Through the Years:

1990 Pleasure
 1989 Class Act, Tournament of Roses, New Beginning, Debut
 1988 Amber Queen, Mikado, Prima Donna

1987 Bonica, New Year, Sheer Bliss
1986 Touch of Class, Broadway, Voodoo
1985 Show Biz
1984 Olympiad, Intrigue, Impatient
1983 Sweet Surrender, Sun Flare
1982 Brandy, Shreveport, French Lace, Mon Cheri
1981 Bing Crosby, Marina, White Lightnin'
1980 Love, Cherish, Honor
1979 Paradise
1978 Color Magic, Charisma
1977 Double Delight, First Edition, Prominent
1976 Seashell
1975 Oregold
1974 Perfume Delight
1971 Command Performance
1970 First Prize
1969 Angel Face, Gene Boerner
1968 Europeana
1965 Mister Lincoln
1963 Tropicana
1961 Duet
1959 Ivory Fashion
1955 Queen Elizabeth
1953 Chrysler Imperial
1950 Fashion
1947 Rubaiyat
1946 Peace
1941 Charlotte Armstrong
1940 Dickson's Red, Flash, The Chief, World's Fair